

Title (en)

Method of storing optically generated charges in a solid state imaging device

Title (de)

Verfahren zur Speicherung optischer erregter Ladungen in einer Festkörperbildsensoreinrichtung

Title (fr)

Procédé de stockage des charges générées optiquement dans un dispositif capteur d'images à l'état solide

Publication

EP 1128437 A3 20021127 (EN)

Application

EP 01102805 A 20010209

Priority

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- JP 2000237521 A 20000804
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- JP 2000292786 A 20000926

Abstract (en)

[origin: EP1128437A2] Disclosed is a method of storing optically generated charges by an optical signal in a solid state imaging device, which is particularly a method of storing optically generated charges by an optical signal in a solid state imaging device using a MOS image sensor of a threshold voltage modulation type, which is used for a video camera, an electronic camera, an image input camera, a scanner, a facsimile or the like. The method comprises the steps of preparing a solid state imaging device having a unit pixel including a photo diode 111 and a MOSFET 112, the MOSFET 112 having a carrier pocket 25 for storing optically generated charges generated in the photo diode 111, the carrier pocket 25 being provided under a channel region 15c in the vicinity of a source region 16, transferring the optically generated charges to the carrier pocket 25 and then storing them therein while maintaining the channel region 15c in an accumulation state such that the optically generated charges are not affected by interface levels in the channel region 15c. <IMAGE>

IPC 1-7

H01L 27/146; **H04N 3/15**

IPC 8 full level

H04N 25/00 (2023.01); **H01L 27/146** (2006.01); **H01L 31/0352** (2006.01)

CPC (source: EP KR US)

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Citation (search report)

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- [Y] US 5430312 A 19950704 - YAMADA MANABU [JP]
- [XD] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12 29 October 1999 (1999-10-29) & EP 0978878 A2 20000209 - INNOVISION INC [JP]
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